

I am a novice grower of *Nepenthes* that I grow along with my collection of other plants. My main interest lies mostly in orchids and bromeliads, so the specific needs of the *Nepenthes* have not exactly been met to the fullest extent. Nevertheless, they perform above my expectations, reacting to my semi-neglect.

As soon as I had developed an interest in this family of plants, I was faced with two problems. First, where to obtain my stock, and second, to locate adequate literature on the subject. Fortunately I was able to overcome the first hurdle by obtaining plants mostly from Asia and Japan. I have assembled a collection of *Nepenthes* consisting of nine species and 21 hybrids which I grow under lights and in a greenhouse. My cultural practices consist of the following: To propagate by seed, I cut up live sphagnum moss with scissors, wet with distilled water, squeeze out lightly and spread out in plastic bags. I then scatter seeds on surface and moisten them with distilled water from an atomizer. I keep them in low light and warm. As the young plants grow, additional misting at 2-to-3-day intervals is beneficial. When the plantlets are about ½ inch in size, I plant them in community pots, still covered with a plastic bag which remains until they reach about 1½ inch in diameter.

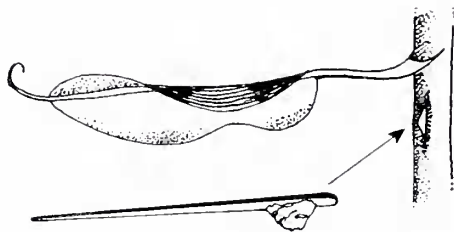
Feeding: I use mostly organic fertilizers such as manure in the proportion of about one pound of fresh cow manure mixed in three U.S. gallons of water. It is sieved through window screen and poured on the plants' mature leaves all during the summer growing season. Urine (Asia) was also used alternatively in a 40:1 ratio applied in the same manner. I feed every three to four weeks. In winter, a balanced complete fertilizer, (NPK as 20:20:20) with trace elements is used every six weeks.

What I have been describing to you

in the above is nothing out of the ordinary, but here comes information that might be of value to some growers of *Nepenthes*. In 1980, I worked with Dr. James Brasch of McMaster University of Hamilton, Ontario, on a plant hormone formulation primarily for orchids. I was the grower who mostly tested the product due to the large number of *Phalangiopsis* orchids I grew and having flower spikes numbering over 100 on my plants for experimentation. After trial and error, the hormone was finalized and the results were very gratifying by being able to produce 70 young plants (mericlones), in the first season of application. In the meantime, our interest turned to a wider field of plants on which to try the hormone formulation. It worked with variable success and at times failed completely. So I decided to experiment with *Nepenthes*, due to their difficult propagation. The hormone worked extremely well on *Philodendron*, etc., wherever a dormant eye is present. The eye (axillary bud) is quite pronounced in most cases in *Nepenthes* where I placed the hormone preparation. In about 80 to 90 percent average, the plants developed new side shoots at all points of application, grew well and pitched in the same manner as the mother plant. Root development in each case was completely absent. Basically, by using the hormone, *Nepenthes* will become a stockier plant with a good number of side branches and greater number of pitchers, which are desirable traits, Illustration 1, 82. If one wants to obtain a larger number of cuttings for propagation, now this is possible. Presently I have *N. gracilis* with eleven branches that I induced with the hormone. The hormone formulation is readily available since it is marketed and can be obtained from: KEIKI GROW Plant Hormone; P.O. Box 354, McMaster University; Hamilton, Ontario L8S 1G0; Canada. Prices

Why They Do *(from page 97.)*

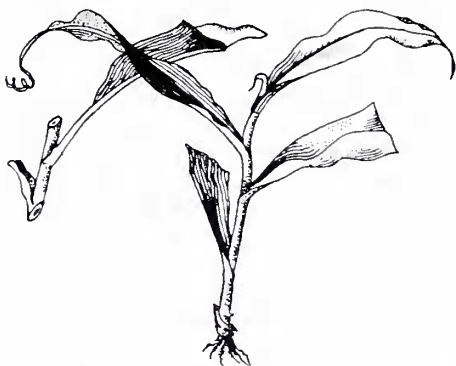
As we continue to offer and acquire our knowledge among ourselves, certain patterns begin to develop among all the articles and experiences, and it is from these patterns that we can learn and ultimately successfully grow that CP. So, continue to write and read and grow by all means, but do so in perspective.



Approximately quantity of hormone to be used on toothpick as an applicator. Position of dormant bud on nodes occasionally is further down or even completely behind leaf axil.



Emerging young side shoot triggered by the application of hormone.



Examples of short and long leaf cuttings.



Emerging shoot at point of hormone application.

Photo by I. Kocsis.

are 15 cc @ \$15, 30 cc @ \$28, 45 cc @ \$35 postpaid anywhere. Further reading suggested on this subject telling in detail how the hormone works with plants, Bull. Amer. Orch. Soc., Oct. 1980 49 (10): 1123, "You can meristem with hormones" by J. D. Brasch and I. Kocsis.

By a very good fortune, I became an owner of some old English horticultural books. Cassels' *Popular Gardening* from about 1875-1885 (actual publishing date missing) and *Greenhouse and Stove Plants* by Thomas Baine, London, 1885. From these books I would like to quote some entries on *Nepenthes*, since as we know those were the days when Victorian gardeners and plant fanciers devoted themselves to the cultivation of *Nepenthes* in their greenhouses, conservatories and "stoves."

"Bornean species are plentiful and easily procurable (in 1885 by author). Those who grow them for sale, propagate them by the thousands. Most failures are due to placing the plants too far from the roof glass. They should be hung only a few inches from the roof and lowered as they get taller. Never injure any of the delicate roots. When repotting one should not attempt to free all roots from the old medium. The risk of damage is too high! When in vegetative growth it needs plenty of water on a daily basis, and even in winter should be kept wetter than most plants.

To reach full potential, *Nepenthes* should be three to five years old, and cut back about twice to possess four to six side shoots with many pitchers. Around the end of February, potting on and taking of cuttings can be done. Plants should be placed in relatively small pots to prevent the media from turning sour. Some shading is required during all times, slightly heavier in the hottest months of the summer. Pitchers formed in the dull fall and winter months will open with warmth and higher light levels of spring weather. Grow them with a minimum of 65° F. at night higher with summer. This is also a safe winter minimum temperature for them. Good drainage, and high humidity should be provided.

Cuttings of two joints with eyes and all portions of leaves of the upper joint retained. Insert in mix of crocks and sand, cover with glass and give bottom heat of 70 to 75 ° F. They will strike any time of the year if the correct conditions are provided for. When large plants are cut back, the base will throw one to several side shoots. Baskets or pots are equally good while pots will dry out slower. Pots can be hidden with sphagnum and placed in wire containers. Pinch cuttings in early spring to check leggy growth. Each cutting should have one to two eyes, with one eye being sufficient to produce a plant when longer cuttings are not possible. A cutting about a foot in length produces roots freely, Fig. 3.

A frame of coconut husk fiber kept very moist and heated to 75 to 80° F. can be used to insert cuttings. Roots will form in about six weeks time. In case the above is not available, a flat pan filled with water some 2½ inch pots may be used. The cuttings placed with their bases through the hole of the pots, but not allowed to touch the water. Over this place a "bell glass" (plastic bag in 1981) and keep in high "stove" temperature (80° F.) The cuttings soon callus and form roots at which time they may be potted up in pure sphagnum moss. For species such as *N. albo-marginata*, *N. rajah*, and *N. sanguinea*, it would be safest to partially sever the portion intended for cutting from the parent stem. Tie a bunch of moist sphagnum moss with sand around the incision. Keep continually saturated with moisture (air layering!) The above species of *Nepenthes* require more abundant water at all times than other species."

With the above I am not offering anything conclusive on *Nepenthes*, but perhaps some or all this will prove to be of some use for those who are interested in this very fascinating group of plants. The books I cite in this article are not available to most, and growers of those times achieved a wider acceptance and popularity of *Nepenthes* than was thought. At least they knew how to deal with them. Personally, I am ready to learn from anyone who has knowledge on this subject.